```
import gensim
from gensim.models import KeyedVectors

EMBEDDING_FILE ="/content/drive/MyDrive/GoogleNews-vectors-negative300.bin.gz"
model = KeyedVectors.load_word2vec_format(EMBEDDING_FILE, binary=True)


model.key_to_index
len(model.key_to_index)
```

```
3000000
```

```
model.vector_size
```

```
300
```

```
model['India']
```

```
array([-5.98144531e-02, -2.86865234e-02, -1.37329102e-02, -3.16406250e-01,
        8.78906250e-03,  1.25976562e-01, -1.59179688e-01,  1.63085938e-01,
        8.77380371e-04,  2.39257812e-02,  2.09960938e-02, -4.93164062e-02,
       -9.27734375e-02, -1.02996826e-03, -8.48388672e-03, -8.00781250e-02,
        9.52148438e-02,  3.01513672e-02,  6.73828125e-02,  1.01562500e-01,
       -3.35937500e-01, -5.49316406e-02, -1.42578125e-01, -2.47802734e-02,
        1.51367188e-01, -1.01074219e-01,  2.57812500e-01,  3.90625000e-02,
       -1.57226562e-01, -5.63964844e-02,  1.33666992e-02,  4.32128906e-02,
        1.64794922e-02, -8.44726562e-02,  1.16699219e-01, -4.37011719e-02,
       -2.60009766e-02,  1.47460938e-01, -8.20312500e-02,  2.81982422e-02,
       -9.76562500e-02, -1.45507812e-01,  2.36328125e-01,  1.44531250e-01,
       -5.68847656e-02, -2.29492188e-01,  4.14062500e-01,  1.03515625e-01,
       -8.00781250e-02,  6.49414062e-02, -1.74804688e-01,  1.26953125e-01,
       -4.19921875e-01,  1.68945312e-01,  7.76367188e-02, -2.31933594e-02,
       -2.27539062e-01, -6.49414062e-02, -2.13867188e-01,  2.55859375e-01,
       -3.05175781e-02, -2.08984375e-01, -2.55126953e-02, -9.57031250e-02,
       -3.19824219e-02,  1.25000000e-01, -7.95898438e-02,  4.32128906e-02,
        2.30468750e-01, -1.63085938e-01,  1.05468750e-01,  3.36914062e-02,
       -1.43554688e-01,  3.97949219e-02,  1.32812500e-01,  9.37500000e-02,
        1.58203125e-01,  8.25195312e-02,  1.89453125e-01, -3.04687500e-01,
        9.17968750e-02, -2.33398438e-01, -1.17187500e-01, -4.29687500e-01,
       -4.51171875e-01, -3.19824219e-02,  1.48437500e-01,  9.71679688e-02,
       -1.80664062e-01, -3.61328125e-01, -5.00488281e-03, -1.57226562e-01,
        2.12890625e-01, -3.90625000e-01,  1.63574219e-02, -5.90820312e-02,
        1.44531250e-01,  1.45507812e-01, -2.63671875e-01,  1.56250000e-01,
        8.83789062e-02, -2.07031250e-01,  1.99218750e-01, -3.35937500e-01,
        2.71484375e-01, -3.02734375e-01, -2.08007812e-01, -2.37304688e-01,
        8.30078125e-03, -7.91015625e-02, -9.03320312e-02, -1.52343750e-01,
        2.17773438e-01,  8.05664062e-02,  2.89062500e-01,  1.68945312e-01,
        2.03125000e-01,  9.91210938e-02, -2.73437500e-01, -5.37109375e-02,
       -3.71093750e-01, -1.07910156e-01,  9.17968750e-02,  1.92382812e-01,
        8.44726562e-02, -1.24023438e-01,  6.83593750e-02, -2.45117188e-01,
        1.36718750e-01, -2.03125000e-01,  9.17968750e-02, -1.03027344e-01,
       -4.76074219e-03,  2.37304688e-01, -1.98242188e-01, -3.37890625e-01,
        2.88085938e-02, -4.80957031e-02, -7.03125000e-02,  7.75146484e-03,
        5.21850586e-03, -1.92871094e-02, -4.83398438e-02,  1.06445312e-01,
        3.73535156e-02,  3.63281250e-01, -8.59375000e-02, -7.37304688e-02,
       -8.34960938e-02,  3.78417969e-02, -2.08984375e-01,  1.67968750e-01,
       -1.95312500e-01, -1.06811523e-02, -1.19018555e-03, -1.72851562e-01,
        2.27539062e-01,  4.78515625e-02, -3.14453125e-01,  9.91210938e-02,
        3.16406250e-01, -6.68945312e-02,  1.45507812e-01,  3.41796875e-02,
       -4.37011719e-02,  7.66601562e-02, -6.44531250e-02, -1.04003906e-01,
        1.45507812e-01,  6.54296875e-02,  4.22363281e-02, -1.73339844e-02,
       -2.30712891e-02,  2.42919922e-02, -9.57031250e-02, -2.94921875e-01,
        1.37695312e-01, -2.79541016e-02,  1.18652344e-01, -1.08398438e-01,
        1.33789062e-01,  1.33789062e-01,  7.51953125e-02,  2.05078125e-01,
        1.24511719e-01, -6.34765625e-02, -3.73535156e-02, -1.31835938e-01,
        3.51562500e-02,  8.74023438e-02,  2.73437500e-01, -5.61523438e-02,
        1.40625000e-01,  6.20117188e-02, -2.34375000e-01, -6.88476562e-02,
        1.82617188e-01, -2.05078125e-02, -1.10839844e-01, -3.88183594e-02,
        1.11816406e-01, -1.53320312e-01,  2.04101562e-01, -6.22558594e-02,
       -3.11279297e-02,  1.40625000e-01, -1.05957031e-01, -2.83203125e-02,
        5.66406250e-02, -9.08203125e-02, -1.17675781e-01,  8.54492188e-03,
       -4.34570312e-02, -4.07714844e-02, -5.54199219e-02,  1.83105469e-02,
       -1.20605469e-01,  1.83593750e-01,  1.58203125e-01, -4.71191406e-02,
       -2.06298828e-02, -1.72119141e-02, -1.20605469e-01, -9.03320312e-02,
       -6.78710938e-02,  1.31835938e-01, -1.19628906e-01, -8.44726562e-02],
      dtype=float32)
```

```
model.most_similar('India',topn=5)
```

```
[('Indias', 0.7384199500083923),
 ('Indiaâ_€_™', 0.6843485832214355),
 ('Pakistan', 0.6706860661506653),
 ('Delhi', 0.6632035374641418),
 ('Bangalore', 0.6583030819892883)]
```

```
a=model.most_similar(positive=['King','Queen'],negative=['man'],topn=1)
a
```

```
[('Queen_Elizabeth', 0.4889819920063019)]
```

```
from gensim.models import Word2Vec

sentences = [["I", "am", "trying", "to", "understand", "Natural", "Language", "Processing"],
             ["Natural", "Language", "Processing", "is", "fun", "to", "learn"],
             ["There", "are", "numerous", "use", "cases", "of", "Natural", "Language", "Processing"]]
```

```
model = Word2Vec(sentences, min_count=1)
```

```
model.vector_size
```

```
100
```

```
len(model.wv.key_to_index)
```

```
17
```

```
model.wv.most_similar('Language')
```

```
[('is', 0.19912298023700714),
 ('learn', 0.17273056507110596),
 ('of', 0.1701897233724594),
 ('trying', 0.1460125893354416),
 ('am', 0.06408584117889404),
 ('There', 0.04652632772922516),
 ('understand', -0.0027230780106037855),
 ('to', -0.013519021682441235),
 ('I', -0.01687549240887165),
 ('use', -0.01965515874326229)]
```

```
model.wv.most_similar('Language', topn=2)
```

```
[('is', 0.19912298023700714), ('learn', 0.17273056507110596)]
```

```
model.wv["Natural"]
```

```
array([-8.6196875e-03,  3.6657380e-03,  5.1898835e-03,  5.7419385e-03,
        7.4669183e-03, -6.1676754e-03,  1.1056137e-03,  6.0472824e-03,
       -2.8400505e-03, -6.1735227e-03, -4.1022300e-04, -8.3689485e-03,
       -5.6000124e-03,  7.1045388e-03,  3.3525396e-03,  7.2256695e-03,
        6.8002474e-03,  7.5307419e-03, -3.7891543e-03, -5.6180597e-04,
        2.3483764e-03, -4.5190323e-03,  8.3887316e-03, -9.8581640e-03,
        6.7646410e-03,  2.9144168e-03, -4.9328315e-03,  4.3981876e-03,
       -1.7395747e-03,  6.7113843e-03,  9.9648498e-03, -4.3624435e-03,
       -5.9933780e-04, -5.6956373e-03,  3.8508223e-03,  2.7866268e-03,
        6.8910765e-03,  6.1010956e-03,  9.5384968e-03,  9.2734173e-03,
        7.8980681e-03, -6.9895042e-03, -9.1558648e-03, -3.5575271e-04,
       -3.0998408e-03,  7.8943167e-03,  5.9385742e-03, -1.5456629e-03,
        1.5109634e-03,  1.7900408e-03,  7.8175711e-03, -9.5101865e-03,
       -2.0553112e-04,  3.4691966e-03, -9.3897223e-04,  8.3817719e-03,
        9.0107834e-03,  6.5365066e-03, -7.1162102e-04,  7.7104042e-03,
       -8.5343346e-03,  3.2071066e-03, -4.6379971e-03, -5.0889552e-03,
        3.5896183e-03,  5.3703394e-03,  7.7695143e-03, -5.7665063e-03,
        7.4333609e-03,  6.6254963e-03, -3.7098003e-03, -8.7456414e-03,
        5.4374672e-03,  6.5097557e-03, -7.8755023e-04, -6.7098560e-03,
       -7.0859254e-03, -2.4970602e-03,  5.1432536e-03, -3.6652375e-03,
       -9.3700597e-03,  3.8267397e-03,  4.8844791e-03, -6.4285635e-03,
        1.2085581e-03, -2.0748770e-03,  2.4403334e-05, -9.8835090e-03,
        2.6920044e-03, -4.7501065e-03,  1.0876465e-03, -1.5762246e-03,
        2.1966731e-03, -7.8815762e-03, -2.7171839e-03,  2.6631986e-03,
```

```
       5.3466819e-03, -2.3915148e-03, -9.5100943e-03,  4.5058788e-03],
      dtype=float32)
```

```
model = Word2Vec(sentences, min_count=2)
```